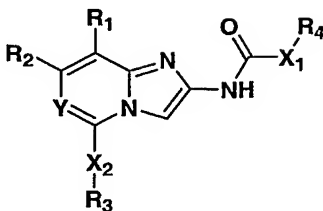


Claims

What is claimed is:



- 5 1. A compound of the formula



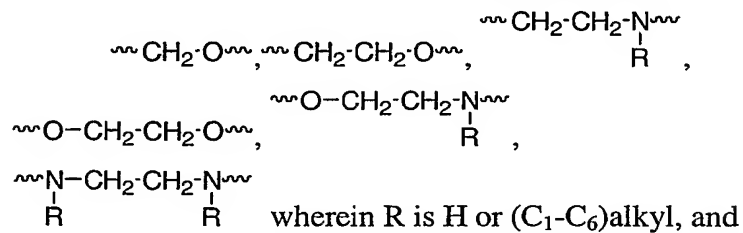
or a pharmaceutically acceptable salt thereof, wherein:

- 10 X_1 is CH_2 , NH , or O ;

X₂ is absent, or is

$(\text{CH}_2)_x$, NH, O, or , , wherein “wavy” are points of attachment, or

- 15 is a tether 2, 3 or 4 atoms in length, selected from



wherein “ \sim ” are points of attachment and x' is an integer from 1

- 20 to 3;

Y is N, C-H, C-F, or C-OMe;

R₁ is H or halo;

- 25

R₂ is (C₃-C₆)cycloalkyl,
(CH₂)_x-aryl,

-91-

 $(\text{CH}_2)_x$ -heterocyclo, or $(\text{CH}_2)_x$ -heteroaryl,

wherein x is 0, 1, or 2;

5 R_3 is H, $(\text{C}_1\text{-C}_6)$ alkyl, $(\text{C}_3\text{-C}_6)$ cycloalkyl,

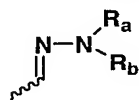
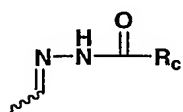
aryl,

heterocyclo,

10 heteroaryl,

 $\text{C}(\text{O})\text{NR}_a\text{R}_b$, $\text{C}(\text{O})\text{R}_a$, CO_2R_a , $\text{C}(\text{O})\text{C}(\text{O})\text{NR}_a\text{R}_b$,15 NO_2 , SO_2R_a , $\text{SO}_2\text{NR}_a\text{R}_b$, $\text{C}(\text{R}_c)=\text{NOR}_a$, $\text{C}(\text{R}_c)=\text{NR}_a$,

20

, wherein “ \sim ” indicates the point of attachment,, wherein “ \sim ” indicates the point of attachment,

and wherein

 R_a is H,

25

 $(\text{C}_1\text{-C}_6)$ alkyl, $(\text{C}_3\text{-C}_6)$ cycloalkyl, $(\text{CH}_2)_y$ -aryl, $(\text{CH}_2)_y$ -heterocyclo, or $(\text{CH}_2)_y$ -heteroaryl,

30

wherein y is 0, 1, or 2;

-92-

R_b is H,

(C₁-C₆)alkyl,
(C₃-C₆)cycloalkyl,
aryl,
heterocyclo, or
heteroaryl;

R_c is H,

(C₁-C₆)alkyl,
(C₃-C₆)cycloalkyl,
aryl,
heterocyclo, or
heteroaryl; and

R₄ is (C₁-C₆)alkyl, (C₁-C₆alkyl)-O-(C₁-C₆alkyl), cyclopropyl, CH₂-cyclopropyl, or cyclobutyl.

2. A compound according to claim 1 in which Y is N.

3. A compound according to claim 1 in which Y is C-H.

4. A compound according to anyone of claims 1-3 in which X₁ is NH, X₂ is absent, or is (CH₂)_x, NH, or O;

R₁ is H;

R₂ is

(CH₂)_x-heteroaryl,

wherein x is 0, 1, or 2;

R₃ is

H,

aryl,

-93-

heterocyclo,
heteroaryl,
C(O)NR_aR_b,
C(O)R_a, or
CO₂R_a,

5

and,

R₄ is (C₁-C₆)alkyl, cyclopropyl, CH₂-cyclopropyl or cyclobutyl.

10

5. A compound according to anyone of claims 1-4 in which R₂ is heteroaryl.

6. A compound according to anyone of claims 1-5 in which R₂ is heteroaryl and is selected from the group consisting of pyridine, and pyrimidine, either of which may be optionally substituted.

15

7. A compound according to anyone of claims 1-6 in which X₂ is absent and R₃ is hydrogen, heteroaryl, C(O)NR_aR_b, C(O)R_a, or CO₂R_a.

8. A compound according to anyone of claims 1-7 in which R₄ is ethyl or cyclobutyl.

20

9. A compound selected from the group consisting of:

(7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-carbamic acid ethyl ester;

1-ethyl-3-(7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;

[7-(2-dimethylamino-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-carbamic acid

25

ethyl ester;

1-[7-(2-dimethylamino-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;

[7-(6-methoxy-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-carbamic acid ethyl

ester;

1-ethyl-3-[7-(6-methoxy-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;

30

1-ethyl-3-[7-(2-methoxy-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;

(7-pyridin-3-yl-imidazo[1,2-c]pyrimidin-2-yl)-carbamic acid ethyl esters;

- 1-ethyl-3-{7-[6-(2-morpholin-4-yl-ethoxy)-pyridin-3-yl]-imidazo[1,2-a]pyridin-2-yl}-urea;
- 1-ethyl-3-(5-hydroxymethyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 1-ethyl-3-(5-formyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 5 2-(3-ethyl-ureido)-7-pyridin-3-yl-imidazo[1,2-a]pyridine-5-carboxylic acid methyl ester;
- 1-ethyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
- 1-[7-(3,5-dimethyl-isoxazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 1-[7-(1-benzyl-1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 10 1-ethyl-3-{7-[6-(4-methyl-piperazin-1-yl)-pyridin-3-yl]-imidazo[1,2-a]pyridin-2-yl}-urea;
- 1-ethyl-3-[7-(1-methyl-1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-[7-(2,4-dimethoxy-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 4-[2-(3-ethyl-ureido)-imidazo[1,2-a]pyridin-7-yl]-3,5-dimethyl-pyrazole-1-
- 15 carboxylic acid tert-butyl ester;
- 1-ethyl-3-[7-(1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-(3-chloro-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-3-ethyl-urea;
- 1-[3-chloro-7-(2-dimethylamino-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 20 2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-7-carboxylic acid methyl ester;
- 2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-7-carboxylic acid amide;
- 1-ethyl-3-[7-(5-methyl-2H-[1,2,4]triazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-[7-(1,5-dimethyl-1H-[1,2,4]triazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea and 1-[7-(2,5-dimethyl-2H-[1,2,4]triazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-
- 25 ethyl-urea;
- 1-ethyl-3-[7-(5-methyl-[1,2,4]oxadiazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-ethyl-3-[5-(1-methyl-1H-pyrazol-4-yl)-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl]-urea;
- 2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-7-carboxylic acid;
- 30 1-[7-(3,5-dimethyl-1H-pyrazol-4-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
- 1-ethyl-3-[7-(piperidine-1-carbonyl)-imidazo[1,2-a]pyridin-2-yl]-urea;
- 1-cyclopropyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;

- 1-cyclopropylmethyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-propyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-isopropyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-3-(2,2,2-trifluoro-ethyl)-urea;
5 1-(2-methoxy-ethyl)-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-cyclobutyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-[7-(6-amino-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
N-(7-acetylimidazo[1,2-*a*]pyridin-2-yl)-*N'*-ethylurea;
1-ethyl-3-[7-(5-methyl-[1,3,4]oxadiazol-2-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
10 {4-[2-(3-ethyl-ureido)-imidazo[1,2-a]pyridin-7-yl]-pyridin-2-yl}-carbamic acid
tert-butyl ester;
1-ethyl-3-[7-(2H-pyrazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-(7-[1,2,3]thiadiazol-4-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-ethyl-3-[7-(5-isopropyl-[1,2,4]oxadiazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
15 1-ethyl-3-[7-(5-oxo-4,5-dihydro-[1,2,4]oxadiazol-3-yl)-imidazo[1,2-a]pyridin-2-
yl]-urea;
{4-[2-(3-ethyl-ureido)-imidazo[1,2-a]pyridin-7-yl]-pyridin-2-yl}-carbamic acid
tert-butyl ester; compound with 1-[7-(2-amino-pyridin-4-yl)-imidazo[1,2-
a]pyridin-2-yl]-3-ethyl-urea;
20 1-ethyl-3-[7-(morpholine-4-carbonyl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-[7-(2-methoxy-pyridin-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-[5-(3-methyl-[1,2,4]oxadiazol-5-yl)-7-pyridin-3-yl-imidazo[1,2-
a]pyridin-2-yl]-urea;
1-ethyl-3-[7-(6-fluoro-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
25 1-ethyl-3-[7-(1-methyl-6-oxo-1,6-dihydro-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-
yl]-urea;
1-ethyl-3-[7-(6-methyl-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-[7-(1-methyl-2-oxo-1,2-dihydro-pyridin-4-yl)-imidazo[1,2-a]pyridin-2-
yl]-urea;
30 7-(2-dimethylamino-pyrimidin-5-yl)-2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-5-
carboxylic acid ethylamide, and

-96-

1-[7-(2-dimethylamino-pyrimidin-5-yl)-5-pyrimidin-2-yl-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea.

10. A compound selected from the group consisting of:

- 5 1-ethyl-3-(7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-ethyl-3-[7-(6-methoxy-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-[7-(2-methoxy-pyrimidin-5-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-(5-hydroxymethyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-ethyl-3-(5-formyl-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
10 2-(3-ethyl-ureido)-7-pyridin-3-yl-imidazo[1,2-a]pyridine-5-carboxylic acid
methyl ester;
1-ethyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-ethyl-3-[5-(1-methyl-1H-pyrazol-4-yl)-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl]-urea;
15 1-propyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-cyclobutyl-3-(7-pyrimidin-5-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
1-[7-(6-amino-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea;
1-ethyl-3-[7-(2H-pyrazol-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-(7-[1,2,3]thiadiazol-4-yl-imidazo[1,2-a]pyridin-2-yl)-urea;
20 1-ethyl-3-[7-(2-methoxy-pyridin-4-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-[5-(3-methyl-[1,2,4]oxadiazol-5-yl)-7-pyridin-3-yl-imidazo[1,2-a]pyridin-2-yl]-urea;
1-ethyl-3-[7-(6-fluoro-pyridin-3-yl)-imidazo[1,2-a]pyridin-2-yl]-urea;
7-(2-dimethylamino-pyrimidin-5-yl)-2-(3-ethyl-ureido)-imidazo[1,2-a]pyridine-5-
25 carboxylic acid ethylamide, and;
1-[7-(2-dimethylamino-pyrimidin-5-yl)-5-pyrimidin-2-yl-imidazo[1,2-a]pyridin-2-yl]-3-ethyl-urea.

11. A pharmaceutical formulation comprising a compound according to
30 anyone of claims 1-10 admixed with a pharmaceutically acceptable diluent,
carrier, or excipient.

-97-

12. Use of a compound according to anyone of claims 1-10 as a medicine.
13. Use of a compound according to anyone of claims 1-10 in the manufacture of a medicament for infectious disease.